

**ABSTRACT**

A heat exchanger includes a first section and a second section for cooling distinct fluids, wherein the second section is adapted for cooling oil. The heat exchanger includes first and second manifolds divided by baffles into first and second chambers. A plurality of tubes connect the manifolds in fluid communication with the first chambers to form the first section of the heat exchanger. A plurality of oil cooling tubes connect the manifolds in fluid communication with the second chambers to form the second section. The oil cooling tubes have a cross-section characterized by a performance ratio between about 3.9 and 8.5 wherein the performance ratio is the ratio of the wetted perimeter in millimeters divided by the cross-sectional area of tube metal in square millimeters. The oil cooling tubes may be formed of extruded metal with internal fins or an extruded tube having a stamped metal insert.